

In the specification:

Please replace paragraph [0070] with the following paragraph:

[0070] The voltage balancing circuit has a property where if the voltage of the electric cell 150 exceeds the predetermined threshold of the discharge voltage (abnormal voltage of the battery), the current will flow through the zener diode 231 so as not to exceed the threshold of the discharge voltage. The doping concentration can be set to between ~~10¹⁷-10¹⁸~~- 10^{17} - 10^{18} and the thickness of the depletion layer between 0.1 μm -1.0 μm so as to set the breakdown voltage of the PN-junction of the discharge circuit the same as to the relevant threshold. As shown in FIG. 8, the breakdown voltage of PN-junction for semiconductors is determined based on the doping concentration and the thickness of the depletion layer only. Therefore, the required doping concentration and the thickness are determined according to the figure. If the properties of the zener diode ~~231, 232~~^{231, 232} are optimized, dark current of the discharge circuit 210 can be reduced, and overdischarge of batteries can be avoided while left uncharged for long periods so that reliable batteries can be supplied.